

Remarks:

The applicant has carefully studied the outstanding final Office Action. The applicant believes the present amendment to be fully responsive to all points of final rejection raised by the Examiner, and to place the application in condition for allowance. The applicant respectfully points out that the amendments made herein are for the purpose of clarifying the previously recited limitations and do not add a wholly new limitation to the claims. As such, these amendments do not require extensive Examiner review, and because they place the application in condition for allowance, or in better form for consideration on appeal, the amendments are appropriate for entry under 37 C.F.R. 1.16(b) and (c), and MPEP 714.13. Favorable reconsideration and allowance of the application are respectfully requested.

Claim rejections - 35 USC § 102

Claims 1, 6, 8, 10-12, 33-35 and 46-49 are rejected under 35 U.S.C. 102(e) as being anticipated by Mittelstadt et al. (U.S. Patent No. 6,322,567). The Examiner states that:

“Regarding claims 1 and 46, figures 1-2 and 4, Mittelstadt et al disclose a device having all the limitations in the above-listed claims, including a surgical robot (11); an attachment member (48, 70 and col. 8, lines 15-25) configures and mounts the surgical robot on a bone (50); a controller programmed (22) prior to the surgical procedure directs the robot to position at the surgical site; and wherein the robot includes at least 3 actuators (42) which mounts on a base member (fig. 2). The actuator is configured for at least translational or rotational movement (col. 8, lines 1-15).”

To the best of the applicant’s understanding, the Examiner’s assertion is that the “bone coupling device 48” and/or the “bone fixator 70” described in the Mittelstadt et al. patent are considered as “mounting the surgical robot on a bone associated with said surgical site”, as recited in claim 1 as currently on file. The applicant respectfully submits that this interpretation of the functionality of the bone coupling device and/or the bone fixator of Mittelstadt et al is incorrect, since the robot shown in Fig. 1 of Mittelstadt et al., and as understood to be described in all of the embodiments shown therein, is a comparatively heavy robot, is mounted on the floor or a cart, and is only connected to a bone to provide contact and thus indexing, but not to “mount the surgical robot on a bone” as in to carry the robot on the bone.

In order to help clarify the meaning of “to mount” as used in the specification and

recited in the claims, claim 1 is amended to recite “an attachment member configured and dimensioned to mount the surgical robot on a bone associated with said surgical site, **such that said robot is supported in its entirety by said bone.**” (Emphasis added.) Support for this amendment can be found in Figs. 2 and 8 of the application, where the robot in its entirety is shown supported by the bone.

The applicant respectfully submits that in no way can the robot of Mittelstadt et al., or any part thereof, be considered as a base member “mounted on a bone associated with said surgical site, such that said robot in its entirety is supported by said bone.” In the first place, in the description of Mittelstadt et al., the passive mechanical arm 48, on whose end is the bone coupling device 48, cannot be described as a “base member” since it is the robot 11 which is specifically described, in col. 6, lines 62-63 and in col. 7, lines 64-65, as acting as a base, and is thuswise shown in Figs. 1 and 2 of Mittelstadt et al. Furthermore, even if this were not considered so, something which the applicant strongly traverses, in no way can the robot shown in Mittelstadt et al be described as being “supported “in its entirety by said bone”, as recited in amended claim 1.

The applicant therefore respectfully submits that amended claim 1 is not anticipated by Mittelstadt et al., and is in allowable form.

The applicant has amended claim 46 in a similar manner to that in which claim 1 has been amended, and respectfully submits that amended claim 46 too is not anticipated by Mittelstadt et al., and is deemed allowable.

Claims 2-6, 8-12, 33-35 and 45, as amended where relevant, are all dependent directly or ultimately from amended claim 1, and recite additional patentable subject matter. Claims 2-6, 8-12, 33-35 and 45, as amended where relevant, are therefore also deemed allowable.

Claim rejections - 35 USC § 103

Claims 2, 13 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mittelstadt et al. (U.S. Patent No. 6,322,567). The Examiner states that:

“Mittelstadt et al disclose a surgical system including all limitations substantially as claimed; however, Mittelstadt et al do not disclose at least 4 actuators that extend outward from the base member. It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct 4 actuators mounted on a base, since it has been held that rearranging parts of an invention involve only

routine skill in the art. In re Japiske, 86 USPQ 70.”

Claim 13 has been amended in a manner similar to the amendment made to claims 1 and 46, to recite “an attachment member removably securable to the robot base member and configured and dimensioned to mount the surgical robot on a bone associated with said surgical site, **such that said robot is supported in its entirety by said bone**”. (Emphasis added.) A similar recitation is also found in amended claims 2 and 45, both being dependent upon amended claim 1. The applicant therefore respectfully submits that the Examiner’s basic assertion that Mittelstadt et al discloses a surgical system including all limitations substantially as claimed in claims 2, 13 and 45 with the exception of at least 4 actuators that extend outward from the base member, is not valid with respect to claims 2, 13 and 45 as clarified herein, and that amended claims 2, 13 and 45 are not obvious in the light of Mittelsatdt et al.

Amended claims 2, 13 and 45 are thus also deemed allowable.

Claims 3-5, 9 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mittelstadt et al. (U.S. Patent No. 6,322,567) in view of Jensen et al (5,814,038). The Examiner states that:

“Mittelstadt et al teach all limitations substantially as claimed except the bone attachment portion includes a clamp. Jensen et al teach the bone attachment portion including a clamp (fig. 1, item 14, col. 7, lines 51-60) in order to grasp and manipulate instrument efficiently under the surgeon’s control. It would have been obvious to one having ordinary skill in the art at the time the invention (was made) modify Mittelstadt et al by adding the bone attachment portion includes a clamp in order to grasp and manipulate instrument efficiently under the surgeon’s control.”

The applicant is unclear of the Examiner’s intentions in this rejection. Claims 3-5 do not recite any bone attachment portion whatsoever, with or without a clamp; claim 9 does indeed recite a bone attachment portion including a clamp, but nowhere is the clamp recited as being operative in order to grasp and manipulate an instrument efficiently under the surgeon’s control, but rather to mate with a specific bone configuration; and claim 50, as now amended, also recites a bone attachment portion including a clamp adaptor, but also not in order to grasp and manipulate an instrument efficiently under the surgeon’s control.

Notwithstanding the Examiner’s rejection, the applicant respectfully submits that claims 3-5 and 9 are dependent from claim 1 which is deemed allowable, and recite additional patentable subject matter, and that claim 50 is dependent from claim 46 which is deemed allowable, and recites additional patentable subject matter. All of claims 3-5 and 9

are therefore deemed allowable.

The Examiner also asserts that new claims 51-54 are directed to an invention that is dependent from non-elected invention IV. Therefore the Examiner has withdrawn claims 51-54 from consideration as being directed to a non-elected invention.

The applicant respectfully submits that this assertion of the Examiner is incorrect. New claims 51-54 are dependent from independent claim 46, which like originally filed claims 1-13, are drawn to a surgical system in elected invention I. Furthermore, the Examiner himself did not object to including originally filed claim 9 in invention I, when originally filed claim 9, like new claims 51-54, recited a clamp as part of a surgical system.

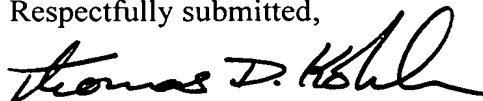
The applicant therefore respectfully requests withdrawal of the Examiner's decision to withdraw claims 51-54 from consideration. Since claims 51-54 are dependent on claim 46, which is deemed allowable, and recite additional patentable subject matter, claims 51-54 are also deemed allowable.

Conclusion

In light of all of the above arguments, the applicants respectfully submit that all of the claims, as amended where applicable, are believed to define patentable subject matter over the prior art, and are considered to be in condition for allowance. Entry of this amendment, and reconsideration and prompt allowance of this application are therefore respectfully requested.

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Respectfully submitted,



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